

ABSTRACT

A solenoid assembly for a valve includes a unitary, one-piece housing comprised of encapsulant. An electromagnetic device is completely encompassed by and embedded in the encapsulant. The device includes i) a bobbin and coil subassembly; ii) a terminal electrically connected to the coil; iii) a yoke surrounding the subassembly; iv) a flux plate electrically connected to the yoke and insulated from the coil such that a flux gap is provided between the coil and yoke; and v) a flux bushing closely received in the bobbin. Lead wires are electrically connected to the terminal and have one end embedded in the encapsulant. A hollow conduit receives and encloses the lead wires, and also has one end embedded in the encapsulant. Upon energization of the coil by current applied to the lead wires, electromagnetic forces generate a magnetic field which can be transmitted to a valve member received in the solenoid assembly.